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| APPLICATION NO.              | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|------------------------------|-------------|----------------------|---------------------|------------------|
| 10/630,422                   | 07/30/2003  | Andrew L. Adamiecki  | Adamiecki 2-6       | 7836             |
| 46850                        | 7590        | 01/13/2005           | EXAMINER            |                  |
| STEVE MENDELSON              |             |                      | JEAN PIERRE, PEGUY  |                  |
| MENDELSON & ASSOCIATES, P.C. |             |                      |                     |                  |
| 1515 MARKET STREET           |             |                      | ART UNIT            |                  |
| SUITE 715                    |             |                      | PAPER NUMBER        |                  |
| PHILADELPHIA, PA 19102       |             |                      | 2819                |                  |

DATE MAILED: 01/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/630,422

Applicant(s)

ADAMIECKI ET AL.

Examiner

Peguy JeanPierre

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3 and 5-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-3, 5-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murray (GB2217957) in view of Patel (USP 5,525,983).

4. Claims 1-3, 5-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Murray et al. (GB 2217957).

Murray et al. disclose In Figure 1, a method of converting analog duo-binary signals to binary in a communication medium, by comparing (CP1, CP2) the duo-binary signals to first (X) and second (Y) reference voltages. A third binary signal is generated through an

exclusive-or-gate (G) circuit based on the comparison result. The logical values (1 or 0) of the first and second binary signals are generated based on the comparison result of the analog input (Z) and the reference voltages and it is inherent that the logical values on the binary signals are determined on whether the reference voltage is higher, or lower or equal than the duo-binary input signal. Figures 3-5 illustrate different connections of the reference voltages and the analog input signal to the positive and negative inputs of the comparators (CP1, CP2). The reference voltage as well known in the art can be selected based on particular criteria (in this case it is not based on peak detection in the input signal). The connections of the voltages will inherently affect the logical values of the binary signals generated by the comparator. It is to be noted both comparators receive the same analog signal having the same amplitude and the bit rate of the input signal is proportional to the bit rate of the comparators. Like any converter/encoder, the duo-binary to binary data converter is an electrical device that can be used in any communication device. Murray disclose essential features of the claimed invention as set forth above except for a splitter that splits the duo-binary signal into a first copy and a second copy before being inputted into the comparators, respectively.

Patel et al. disclose in Figure 1, a duo-binary to binary encoder circuit that comprises a data splitter (15) that splits the duo-binary signal before its conversion to binary (see col. 5, lines 42-53). The system of Patel can handle high speed data transmission (see col. 1, lines 9-11 and 15-33). By splitting the signal the ternary signal the bandwidth of the splitter decreases so is the bandwidth of all the circuits namely logic gates and

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comparators etc... that are involved in the conversion process. The system of Patel et al. is designed to maintain DC balance in the transmitted signal. Therefore, it would have been obvious to one having ordinary skill in the art to apply the teachings by Patel et al. of splitting the ternary signals before its conversion to binary in the converter of Murray to provide a more stable converter, less susceptible to interference or other forms of disturbances, and capable to operate at a higher frequency.


### ***Response to Arguments***

5. Applicant's arguments with respect to claims 1-3 and 5-30 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Heaton et al. (USP 5,664,108), Cho (EPO 551858), Johnson (USP 5,640,605) disclose duo-binary to binary converters.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peguy JeanPierre whose telephone number is (571) 272-1803/272-1803. The examiner fax phone number is (571) 273-1803.

  
Peguy JeanPierre  
Primary Examiner